We Claim:

1. A tool for applying an implantation force to a fastener sized and configured for implantation in tissue in response to an implantation force, the tool comprising

a tool body,

a driven member carried by the tool body and being operable to apply the implantation force, the driven member including a drive actuator to operate the driven member, and

a mechanism on the driven member operable in a first condition to couple the fastener to the driven member to transfer the implantation force from the driven member to the fastener, the mechanism being operable in a second condition to release the fastener from the driven member, the mechanism including a second actuator operable independent of the drive actuator to place the mechanism in the second condition.

2. An assembly according to claim 1

wherein the second actuator also places the mechanism in the first condition.

3. An assembly according to claim 1

wherein the mechanism includes means for placing the mechanism in the first condition absent operation of the second actuator.

4. An assembly according to claim 1

wherein the mechanism includes a support element on the driven member sized and configured to assume the first condition absent operation of the second actuator.

5. An assembly according to claim 1

wherein the driven member is also operable to apply a removal force to withdraw the fastener from tissue, and

wherein the mechanism is also operable in the

first condition to couple the fastener to the driven member to transfer the removal force from the driven member to the fastener.

6. An assembly according to claim 5 wherein the driven member is rotated in one direction to apply the implantation force and rotated in an opposite direction to apply the removal force.

7. An assembly according to claim 1 wherein the tool body includes a tube.

8. An assembly according to claim 1 wherein the mechanism includes a support element on the driven member that defines a receptacle that, in the first condition, is closed to retain at least a portion of the fastener and that, in the second condition, is opened to release the fastener, and wherein the second actuator opens the receptacle.

9. An assembly according to claim 8 wherein the second actuator also closes the receptacle.

10. An assembly according to claim 8 wherein the support element includes a bias that normally closes the receptacle, and wherein the second actuator overcomes the bias to open the receptacle.

11. An assembly according to claim 8 wherein the support element includes a bias that normally closes the receptacle, and wherein the second actuator ejects the fastener from the receptacle, overcoming the bias.

12. An assembly according to claim 8 wherein the support element includes a detent associated with the receptacle that, in the first condition, is advanced to project into the receptacle to close the receptacle and that, in the second condition,

is withdrawn from the receptacle to open the receptacle, and

wherein the second actuator withdraws the detent to open the receptacle.

13. An assembly according to claim 12

wherein the second actuator also advances the detent to close the receptacle.

14. An assembly according to claim 8

wherein the support element includes a detent associated with the receptacle that, in the first condition, is advanced to project into the receptacle to close the receptacle and that, in the second condition, is withdrawn from the receptacle to open the receptacle, the support element including a bias that normally advances the detent, and

wherein the second actuator overcomes the bias by ejecting the fastener past the detent.

15. An assembly according to claim 8

wherein the support element comprises a jaw assembly that defines the receptacle.

16. An assembly according to claim 8

wherein the support element comprises a strut assembly that defines the receptacle.

17. An assembly according to claim 1

wherein the mechanism includes a support element on the driven member that defines a gripping assembly that, in the first condition, is advanced to engage at least a portion of the fastener and that, in the second condition, is withdrawn to disengage the fastener, and

wherein the second actuator withdraws the gripping assembly to disengage the fastener.

18. An assembly according to claim 17

wherein the support element includes a bias that normally advances the gripping assembly, and

wherein the second actuator overcomes the bias to withdraw the gripping assembly.

19. An assembly according to claim 1 further including a fitting sized and configured to be appended to the fastener, and

wherein the mechanism is sized and configured to engage the fitting when in the first condition and to disengage the fitting when in the second condition.

20. An assembly according to claim 19 wherein the fitting includes a brace sized and configured to be carried on a proximal end of the fastener.

21. An assembly according to claim 19 wherein the fitting includes a cap sized and configured to be carried on a proximal end of the fastener.

22. An assembly according to claim 1 further including an element tethering the fastener to the tool body, the element including a frangible portion.

23. An assembly according to claim 1 wherein the driven member is rotated to apply the implantation force.

24. An assembly according to claim 1 further including a controller coupled to the driven member to operate the driven member to apply a prescribed implantation force.

25. A system for implanting a fastener in tissue comprising

a fastener sized and configured for implantation in tissue in response to an implantation force, including a shaped fitting carried by the fastener, and

a fastening tool including a driven member operable to apply the implantation force, the driven

member including a drive actuator to operate the driven member, a mechanism on the driven member operable in a first condition to engage the shaped fitting and couple the fastener to the driven member to transfer the implantation force from the driven member to the fastener, the mechanism being operable in a second condition to disengage the shaped fitting and release the fastener from the driven member, the mechanism including a second actuator operable independent of the drive actuator to place the mechanism in the second condition.

26. A system according to claim 25

wherein the driven member is also operable to apply a removal force to withdraw the fastener from tissue, and

wherein the mechanism is also operable in the first condition to engage the shaped fitting and couple the fastener to the driven member to transfer the removal force from the driven member to the fastener.

27. A system according to claim 26

wherein the driven member is rotated in one direction to apply the implantation force and rotated in an opposite direction to apply the removal force.

28. A system according to claim 25

further including an element tethering the fastener to the fastening tool, the element including a frangible portion.

29. A system according to claim 25

wherein the fastening tool includes a tube that carries the driven member.

30. A system according to claim 25

wherein the driven member is rotated to apply the implantation force.

31. An assembly according to claim 25

further including a controller coupled to the driven member to operate the driven member to apply a

prescribed implantation force.

32. A tool for applying an implantation force to a fastener sized and configured for implantation in tissue in response to an implantation force applied according to prescribed conditions, the tool comprising

a tool body,

a driven member carried by the tool body and being operable to apply the implantation force,

a mechanism on the driven member to couple the fastener to the driven member to transfer the implantation force from the driven member to the fastener,

a controller coupled to the driven member, the controller including an initial phase operating the driven member to apply the implantation force under conditions than are short of the prescribed conditions, a lull phase commencing at the end of the initial phase interrupting operation of the driven member, a final phase operating the driven member under conditions that supplement the conditions of the initial phase to achieve the prescribed conditions, the controller requiring, after the initial phase, a prescribed command to advance from the lull phase to the final phase.

33. An assembly according to claim 32

wherein the prescribed command is based, at least in part, upon input from an operator.

34. An assembly according to claim 32

wherein the prescribed command is based, at least in part, upon input reflecting a sensed operating condition.

35. An assembly according to claim 32

wherein the driven member is also operable to apply a removal force to withdraw the fastener from tissue, and

wherein the controller includes a removal

phase operating the driven member to apply the removal force, the controller requiring, after the initial phase, a different prescribed command to advance from the lull phase to the removal phase.

36. An assembly according to claim 35 wherein the driven member is rotated in one direction to apply the implantation force and rotated in an opposite direction to apply the removal force.

37. An assembly according to claim 32 further including an element tethering the fastener to the tool body, the element including a frangible portion.

38. An assembly according to claim 32 wherein the tool body includes a tube that carries the driven member.

39. An assembly according to claim 32 wherein the driven member is rotated to apply the implantation force.

40. A tool for applying an implantation force to a fastener sized and configured for implantation in tissue in response to an implantation force, the tool comprising

a tool body,

a driven member carried by the tool body and being operable to apply the implantation force, and

an element tethering the fastener to the tool body, the element including a frangible portion.

41. An assembly according to claim 40 wherein the tool body includes a tube that carries the driven member.

42. An assembly according to claim 40 further including a controller coupled to the driven member to operate the driven member to apply a prescribed implantation force.

43. A method for implanting a fastener in

tissue comprising the steps of

providing a tool as defined in claim 1,

coupling a fastener to the driven member when the mechanism is in the first condition,

accessing a tissue region,

operating the drive actuator to implant the fastener in the tissue region, and

operating the second actuator to release the fastener from the driven member.

44. A method for implanting a fastener in tissue comprising the steps of

providing a tool as defined in claim 32,

coupling a fastener to the driven member,

accessing a tissue region,

operating the driven member during the initial phase to partially implant the fastener in the tissue region,

deciding during the lull phase to commence the final phase,

entering the prescribed command to advance from the lull phase to the final phase, thereby completing the implantation of the fastener in the tissue region.

45. A method for implanting a fastener in tissue comprising the steps of

providing a tool as defined in claim 32,

coupling a fastener to the driven member,

accessing a tissue region,

operating the driven member during the initial phase to partially implant the fastener in the tissue region,

deciding during the lull phase not to commence the final phase,

deciding during the lull phase to remove the fastener and thereby fail to enter the prescribed command

so as not to advance from the lull phase to the final phase.

46. A method for implanting a fastener in tissue comprising using a tool as defined in claim 40.

47. A method for implanting a fastener in tissue comprising the steps of

providing a tool as defined in claim 40,

coupling a fastener to the driven member,

accessing a tissue region,

operating the driven member during the initial phase to implant the fastener in the tissue region, and

breaking the frangible portion of the tethering element to part the fastener from the tool.